

AMENDMENT(S) TO THE CLAIMS

1.
(canceled)

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(canceled)

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(canceled)

1 6. (currently amended): A method comprising:
2 packetizing content information including video objects;
3 generating resource coordination information based at least in part on at
4 least one prioritizing parameter associated with an application communicating the
5 content information and on one or more prioritizing parameters associated with a
6 particular video object that is selected by a user interaction via a remote device that
7 is operatively coupled to a network such that the one or more prioritizing
8 parameters reflect that the particular video object has a relatively higher priority
9 than other ones of the video objects and is to be allocated a relatively higher
10 portion of available bandwidth so that the particular video object can be provided
11 to the remote device with relatively better perceptual visual quality;

12 selectively associating each packet of content information with a service
13 class selected from among at least two different service classes based on the
14 resource coordination information;

15 selectively outputting at least one packet of content information based on a
16 priority associated with the service class associated with the packet of content
17 information such that the available bandwidth is allocated in accordance with the
18 priority associated with the service class; and

19 providing the at least one packet of content information to the network.
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21 7. (currently amended): The method as recited in Claim 6, wherein the
22 user interaction comprises selection of the particular video object by at least one of
23 mouse clicking, mouse moving, object zoom-in, or object zoom-out, ~~add or delete~~.
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1 **8.** (original): The method as recited in Claim 6, wherein generating the
2 resource coordination information further includes generating the resource
3 coordination information based at least in part on at least one prioritizing
4 parameter associated with a monitored performance of the network.

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6 **9.** (previously presented): The method as recited in Claim 6, further
7 comprising encoding initial content information as the content information.

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9 **10.** (original): The method as recited in Claim 9, further comprising
10 segmenting raw video data into a plurality of video objects and wherein at least
11 one of the video objects is included in the initial content information.

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13 **11.** (previously presented): The method as recited in Claim 9, wherein
14 the initial content information includes data representing media information
15 selected from a group comprising video information, audio information, image
16 information, and textual information.

1 12. (currently amended): One or more computer-readable storage media
2 comprising computer instructions for performing acts comprising:

3 generating prioritization information based at least in part on at least one
4 parameter associated with an application streaming media information and on one
5 or more prioritizing parameters associated with a particular video object that is
6 selected from the media information by a user interaction via a remote device that
7 is operatively coupled to a network such that the one or more prioritizing
8 parameters reflect that the particular video object has a relatively higher priority
9 than other video objects and is to be allocated a relatively higher portion of
10 available bandwidth so that the particular video object can be provided to the
11 remote device with relatively better perceptual visual quality;

12 associating packets of the media information with a service class selected
13 from a plurality of different service classes based on the prioritization information;

14 selectively discarding a portion of the packets of the media information in
15 accordance with an adaptive rate control mechanism at a sending computing
16 device; and

17 selectively outputting from the sending computing device onto the network
18 some of the packets of media information based on their respective service classes
19 such that the available bandwidth is allocated in accordance with respective
20 priorities associated with the respective service classes.

1 **13.** (currently amended): The one or more computer-readable storage
2 media as recited in Claim 12, wherein the media information includes data
3 representing media information selected from a group comprising video
4 information, video objects, audio information, image information, and textual
5 information.

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7 **14.** (canceled)

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9 **15.** (canceled)

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11 **16.** (canceled)

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13 **17.** (canceled)

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15 **18.** (canceled)

1 19. (currently amended): ~~An~~ A computing apparatus having storage
2 media, the computing apparatus comprising:

3 packetizer logic configured to receive encoded content information and
4 output corresponding packets of content information, the content information
5 including video objects;

6 collaborator logic operatively coupled to the packetizer logic and
7 configured to receive at least one prioritizing parameter associated with at least
8 one application, including an application communicating the content information,
9 and one or more prioritizing parameters associated with a particular video object
10 that is selected by a user interaction via a remote device that is operatively coupled
11 to a network such that the one or more prioritizing parameters reflect that the
12 particular video object has a relatively higher priority than other ones of the video
13 objects and is to be allocated a relatively higher portion of available bandwidth so
14 that the particular video object can be provided to the remote device with relatively
15 better perceptual visual quality; the collaborator logic further configured to output
16 resource coordination information based at least in part on the at least one
17 prioritizing parameter associated with the application and the one or more
18 prioritizing parameters associated with the particular video object;

19 priority mapping logic operatively coupled to the collaborator logic to
20 receive the resource coordination information and operatively coupled to the
21 packetizer logic to receive the packetized content information, the priority
22 mapping logic configured to selectively associate each received packet of content
23 information with a service class selected from among at least two different service
24 classes based on the resource coordination information, and to selectively output at
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1 least one packet of content information based on a priority associated with each
2 service class; and

3 forwarder logic operatively coupled to the priority mapping logic and
4 configurable to provide the at least one packet of content information to the
5 network such that the available bandwidth is allocated in accordance with a
6 priority associated with each service class.

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8 20. (currently amended): The computing apparatus as recited in Claim
9 19, wherein the user interaction comprises selection of the particular video object
10 by at least one of mouse clicking, mouse moving, object zoom-in, or object zoom-
11 out, ~~add or delete~~.

12
13 21. (currently amended): The computing apparatus as recited in Claim
14 19, further comprising:

15 network monitoring logic operatively coupled to the collaborator
16 logic and configurable for use with the network and in monitoring network
17 performance, and to output at least one prioritizing parameter associated with the
18 network performance, and

19 wherein the collaborator logic is further configured to receive the at
20 least one prioritizing parameter associated with the network performance, and
21 output the resource coordination information based at least in part on the at least
22 one prioritizing parameter associated with the network performance.

1 22. (currently amended): The computing apparatus as recited in Claim
2 19, further comprising:

3 encoding logic operatively coupled to the packetizer logic and
4 configured to encode initial content information, and output corresponding
5 encoded content information.

6
7 23. (currently amended): The computing apparatus as recited in Claim
8 22, further comprising:

9 segmentation logic operatively coupled to the encoding logic and
10 configured to segment raw video data into a plurality of video objects, and output
11 initial content information that includes at least one video object of the video
12 objects.

13
14 24. (currently amended): The computing apparatus as recited in Claim
15 22, wherein the initial content information includes data representing media
16 information selected from a group comprising video information, audio
17 information, image information, and textual information.

1 25. (currently amended): A system comprising:
2 a network environment including a backbone network, and a first access
3 network and a second access network each being operatively coupled to the
4 backbone network;
5 a plurality of host devices including a first host device operatively coupled
6 to the first access network and a second host device operatively coupled to the
7 second access network, the second host device receiving a user interaction
8 comprising selection of a particular video object; and
9 a plurality of application-aware resource controllers including a first
10 application-aware resource controller operatively configured within the first access
11 network and a second application-aware resource controller operatively configured
12 within the second access network, wherein the first application-aware resource
13 controller is configured to aggregate content information associated with at least
14 one communication session established between the first host device and the
15 second host device via the network environment and to map the aggregated
16 information to at least two service classes selected from a group of two or more
17 different service classes based at least in part on one or more prioritizing
18 parameters associated with the selection of the particular video object, and wherein
19 the one or more prioritizing parameters reflect that the particular video object has a
20 relatively higher priority than other video objects and is to be allocated a relatively
21 higher portion of available bandwidth within the network environment so that the
22 particular video object can be provided to the second host device with relatively
23 better perceptual visual quality;
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1 wherein at least the first application-aware resource controller is configured
2 to operatively associate a respective priority with each respective service class of
3 the two or more different service classes so that the available bandwidth can be
4 allocated by the first application-aware resource controller in accordance with the
5 respective priority associated with each respective service class.

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7 26. (previously presented): The system as recited in Claim 25, wherein
8 at least the first application-aware resource controller is configured to selectively
9 adapt a flow rate associated with the content information based on an identified
10 state of at least one of the first access network, the second access network, or the
11 backbone network .

12
13 27. (previously presented): The system as recited in Claim 25, wherein
14 at least the first application-aware resource controller is configured to selectively
15 adapt a flow rate associated with the content information based on at least one
16 identified requirement of the second host device.

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18 28. (original): The system as recited in Claim 25, wherein at least the
19 first application-aware resource controller is configured to control the content
20 information responsive to application-based signaling.

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22 29. (canceled)

1 **30.** (Previously presented): The system as recited in Claim 25, further
2 comprising at least one processing agent operatively configured within the
3 backbone network and configured to selectively filter the aggregated information
4 associated with different communication sessions based on identified bandwidth
5 constraints and service classes.

6
7 **31.** (Previously presented): The system as recited in Claim 25, wherein
8 the content information includes data representing media information selected
9 from a group comprising video information, audio information, image information,
10 and textual information.

11
12 **32.** (Previously presented): The system as recited in Claim 30, wherein
13 the processing agent is further configured to perform packet-level fast transcoding
14 and related signaling.

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16 **33.** (canceled)

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18 **34.** (currently amended): The computer-readable media as recited in
19 Claim 12, wherein the user interaction comprises selection of the particular video
20 object by at least one of mouse clicking, mouse moving, object zoom-in, or object
21 zoom-out, ~~add or delete~~.

1 **35.** (currently amended): The system as recited in Claim 25, wherein the
2 user interaction comprises the selection of the particular video object by at least
3 one of mouse clicking, mouse moving, object zoom-in, or object zoom-out, ~~add or~~
4 ~~delete.~~